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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/927,753	08/10/2001	Thomas R. Fields	2025.29	6611

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EXAMINER

LAVILLA, MICHAEL E

ART UNIT PAPER NUMBER

1775

DATE MAILED: 05/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/927,753

Applicant(s)

FIELDS, THOMAS R.

Examiner

Michael La Villa

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-136 is/are pending in the application.
- 4a) Of the above claim(s) 83-108 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1, 4-82, 109-115, and 120-136 is/are allowed.
- 6) ☒ Claim(s) 116-119 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. Claims 116-119 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murano USPA 2002/0108708. Murano teaches coating a clear polymeric substrate with a first discontinuous metal layer and a second discontinuous metal layer. See Murano (Abstract; Figures 1 and 2; paragraphs 25, 28, 30, 31, 34, 46, 49, 50; and Claims). Murano does not exemplify a PVF or PVDF substrate film, but does teach that such films are effective. It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize a PVF or PVDF substrate film in the articles of Murano as Murano teaches that laminates formed from such substrate films are effective. Murano does not exemplify two

discontinuous metal island layers formed of indium and tin as claimed, but does teach that such materials are effective for forming laminates having two discontinuous layers. It would have been obvious to one of ordinary skill in the art at the time of the invention to fabricate the articles of Murano with two discontinuous metal island layers of the claimed materials in the claimed order of deposition as Murano teaches that such metal materials formed in these structures form effective laminates. Murano suggests that the first thermoplastic layer may be tinted. It would have been obvious to one of ordinary skill in the art at the time of the invention to tint the PVF or PVDF first thermoplastic layer as Murano teaches that effective layers in this position of the laminates of Murano may be tinted. Such tinted films may be deemed a design. Murano teaches that a third thermoplastic layer may be applied on the second discontinuous metal layer and that thermoplastic layers may be applied on discontinuous metal layers with an adhesive material. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply an adhesive layer prior to applying the third thermoplastic layer as Murano teaches that this is an effective method of applying a thermoplastic layer. It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize any of the thermoplastic materials disclosed by Murano for the third layer, including those claimed, since these are described as effective by Murano. Murano teaches that the islands are discrete and specular at paragraph 25, and the islands are depicted in Figures 1 and 2 as having widths of comparable size to thickness. Since the thickness are

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comparable to 30 nm, the average width would be expected to be less than 100 nm. Murano teaches that depositing two metal island layers provides effective laminates and that metal island layers may be made of any number of metals. It would have been obvious to one of ordinary skill in the art at the time of the invention to fabricate both metal island layers from the same material as Murano teaches that islands of the layers can be made of indium or other metals, which encompasses layers of the same metals.

Response to Amendment

- I. In view of applicant's amendments and arguments, applicant traverses the section 112, second paragraph rejections of the Office Action mailed on 27 October 2003. Rejections are withdrawn. Applicant's response is understood to mean that "contiguous" requires "intimate contact" as referred to in the Specification at the portion cited by applicant. Applicant's response is understood to mean that deposited randomly oriented metal flakes would not be encompassed by the terminology "discontinuous layer of metal islands."
- II. In view of applicant's amendments and rejections, applicant traverses the section 103 rejection over Murano of the Office Action mailed on 27 October 2003. Rejections are withdrawn

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except to the extent that they are presented above for the reasons given above.

Allowable Subject Matter

4. Claims 1, 4-82, 109-115, and 120-136 are allowed. These claims were indicated as being allowable in the Office Action mailed on 27 October 2003. Further search and consideration of the non-elected species reveals that the claimed subject matter is neither taught nor suggested by the prior art of record and the reviewed prior art. Hence, the claims are allowed.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael La Villa whose telephone number is (571) 272-1539. The examiner can normally be reached on Monday through Friday.
6. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on (571) 272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael La Villa
May 11, 2004